Appendix I

Water Column to Wetlands REA Details

INJURY CALCULATION

species	mortality	kg/animal	animal-year multiplier	lost kg-years (discounted)	ecological efficiency	kg of biomass needed
unknown epipelagic fish	5	1	0.8333	4	0.0016	2,604
shrimp	4,600,000	0.0007143	0.8333	2,738	0.008	342,250
epipelagic anchovy	6,000	0.0201667	0.8333	101	0.008	12,625
			Based on life expectancy of average age individual	Note: no discounting was used because life expectancy is less than one year		
				TOTAL:	**2,843**	**357,486**

CREDIT CALCULATION (projected restoration benefits *per square meter*)

Year	% of Potential Marsh Productivity	Annual Production (kg/m^2)	Discounted to 1998
2003	0%	0.00	0.00
2004	5%	0.26	0.22
2005	10%	0.52	0.42
2006	15%	0.78	0.62
2007	20%	1.04	0.80
2008	25%	1.31	0.97
2009	30%	1.57	1.13
2010	35%	1.83	1.28
2011	40%	2.09	1.42
2012	45%	2.35	1.55
2013	50%	2.61	1.68
2014	55%	2.87	1.79
2015	60%	3.13	1.89
2016	60%	3.13	1.84
2017	60%	3.13	1.79
2018	60%	3.13	1.73
Continues to 2104.		Based on a potential maximum benefit of 5.22 kg/m^2	Discounted at 3% per year
		Total:	**72.4**

Number of sq. meters needed for project would be 357,846/72.4 = **4,938 m^2 = 1.2 acres**.